Capítulo 1. Digital Tool for Frameworking Startups Business Model

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Goals
• This chapter aims to explore the digital business models' framework, its derivations, possible adaptations and drawbacks. • To identify success factors as well as general faults, common pitfalls and difficulties that may assist in the evaluation of future business ideas, in a digital world. • To draw some possible strategies and a theoretical basis for the development of a digital online tool, to be implemented in Higher Education Institutions or Business Incubators environment.

Introduction

In the last two decades, there has been an exponential growth in digital technologies, alongside innovations and disruptive technologies, a phenomenon identified as the fourth industrial revolution. In this scenario, creating new businesses encompasses uncertainty and entrepreneurs face all sort of dilemmas when preparing the development of a new idea.

While the importance of entrepreneurship and innovation to the economy and regional development is evident, becoming an entrepreneur is, therefore, not an easy task. Creating a successful business means that a successful idea must be put into practice. Thus, there is an interest in evaluating the largest possible number of predictors in order to achieve the goal with the minimum waste of time, as the creation of a business involves complex and interrelated steps. These steps encompass the development of the idea of business, the definition of business strategies and growth.

In response to this modern complexity and the needs of entrepreneurs, business support structures have emerged and gave rise to entrepreneurship ecosystems, where collaboration and co-creation practices have been identified. Also, business models' frameworks have been created to simplify that complex process and allow a more visual, straightforward, fast and interconnected structure of the most critical parts of the business. Therefore, they can be very useful tools, especially for entrepreneurs without formal education or training in management. Entrepreneurs without technology related scientific areas, industry-related competence, or having little experience in creating new business can, as well, get advantage with these simplified tools.

Following the rise of entrepreneurship ecosystems, Higher Education Institutions (HEI) are also called to develop actions and plans towards entrepreneurship and are called to act as developers of entrepreneurial ecosystems and innovation activities. This also encompasses the preparation of the already mentioned tools that allow for the simplification of such complex processes of business modeling. HEIs intervein in this process by researching, developing, and validating such tools.

This chapter presents some findings, based on academic research, towards the success factors that can be evaluated prior to the business implementation, in order to help the preparation of an online digital tool for business model frameworks.

Firstly, this chapter includes a literature review about the definition of business model and a strategic perspective about it, including the adaptation of business models frameworks to different perspectives and the identification of the most relevant indicators for success or failure of a business model. These indicators are then considered as the basis for a theoretical framework for an online digital tool that allows the evaluation of new ventures business model. The second part describes the research methodology. The last two parts present discussion, conclusions, limitations and directions for future research.

1. Literature Review

1.2 Business Model Concept

The concept of business model emerged years ago, and several authors have written and studied the many complexities of this topic. It deals with the assumptions on which any organization is built (and on which its management is based), for example: how to identify customers and competitors and their values and behaviors; markets; technology; the company's strengths and weaknesses; decisions about what to do and what not to do and define what is considered as significant results. To better relate the creation of business and its success factors possible indicators, the business model frameworks seemed a very good basis of work. As already presented, the complexity of the modern times makes it increasingly important to relate strategy, technology, innovation and business models, but it is consensual that technology only represents value from the moment it is commercialized through a business model. This was corroborated by Teece (2010, p. 285) when stating that technology is not everything because "innovation of the business model can be a path to competitive advantage if the model is sufficiently differentiated and difficult to replicate for incumbent operators and new entrants". Linder and Cantrell (2000) studied business models, identifying three different perspectives:

- Components of a business model: for example, revenue models or value proposition, distribution models or organizational structure, each can be an important part of a business model, but it does not represent the structure.
- Operational models: they are understood as real models, corresponding to the central logic of an organization to create value.
- Models of change: represent how an organization adapts to dynamic environments by describing the main logic of how an organization should remain profitable in dynamic and changing business environments. In the opinion of these authors, the models of change allow scaling and leveraging operational business models.

In 2010, Osterwalder, Pigneur and Clark developed a concept of innovation in business models, based on a language that allows to easily describe and change these same models in order to streamline the creation of new strategic alternatives. According to these authors, a business model is nothing more than a map of the particular strategy of an organization to be implemented through organizational structures, processes and systems. Therefore, a business model is described as a representation of how an organization creates, delivers, and captures value, allowing a company to successfully implement its strategy, which is an important advantage.

But a business model must also be thought out and triggered according to its environment, in order to be better understood within a framework of business strategy. So, an enhanced version of the description of a business model can be described as the way an organization creates, delivers and captures value, in certain markets and considering the different economic, social, cultural or other contexts. The process of building and modifying a business model is also called business model innovation and is part of a company's business strategy. The business model is used to represent and define basic but essential aspects of a business, including purpose, offers, business process, target customers, strategies, infrastructure, sourcing, organizational structure, business practices and operational processes and policies. In 2010, Osterwalder and Pigneur defend “the summary characterization of the business model environment, as well as the need to reflect on what the trends mean for the company's future” (p. 200).

When established companies decide to adapt their business models to meet changing customer needs, they should be very careful when observing the competitors and market environment, because the introduction of a competing business model has consequences on the already established business model and they can be positive (e.g., key learnings, door opener, and access to new markets) or negative (cannibalization and brand dilution).

Based on the existing research of business models and drawing on business models for the Internet platform enterprises, we can identify five success factors: value proposition; core resources and capabilities; key activities; pricing and service; and profit model.

Mateu and March-Chorda (2016) proposed an assessment method that can assess theoretical business models before implementing them (ex-ante methods), i.e., assessment methods to choose the most promising business models. These authors mention Amit and Zott (2001) that had also proposed an ex-ante assessment method consisting of four indicators that measure model efficiency, complementarities, barriers to supply change for the customer and novelty. Mateu and March-Chorda (2016) proposed eight indicators, which try to quantify: the relevance that the value proposition of the business model will bring to the targeted customer; the complete value proposition condition; the sufficient size of the market condition; the access to the potential customer condition; the predisposition to make efforts condition; the affordable costs condition; the superiority over competitors' condition and the entry barriers existence condition.

Through multiple linear regression analysis, the authors concluded that two of the eight indicators stand out and have a remarkable weight in the intuitive assessment statistic model indicators: the value creation condition and the sufficient size of the market condition. Nevertheless, other academics point out the risks of failure, that is influenced by false assumptions about the distribution channels, cost structure, unit margins, and velocity elements of the innovation, which are often carried over from the incumbent business model.

1.2 Designing Business Model

A firm's business model influences its performance, and for that matter, a well-designed business model balances the value offered to customers with the capture of value by the provider and financial indicators. Therefore, we can also measure the success of a business model in line with what is defined in its different items such as sources of revenue, cost structure, distribution channels or value proposition.

Phangestu *et al.* (2020) found a significant relationship, corroborated by data, that shows that there is a positive correlation between business model innovation and start-up performance. They also found a significant relationship of entrepreneurial leadership and competitive advantage to business model innovation.

1.3 Perspectives about the use of Business Model and the strategies behind it

Although strategy and business model are closely intertwined, they are not similar concepts. Strategies necessarily imply making choices (how to create and capture value within a value network), while business models reflect these choices and their operating implications. Therefore, strategies, business models and business processes need to be aligned. A firm's business model serves not only to provide some stability for the development of a company, but also to be flexible enough to allow for change. Business model change can be associated to different types and degree of innovation, from incremental to radical. Business Model Innovation is based on three strategic perspectives: the resourced-based view of the firm, the dynamic capabilities view and the strategic entrepreneurship view. But sometimes, business models fail, because of two main factors: inefficiencies of the business model and disruptive innovations. The consequence is that, when a disruptive innovation arises turns the current business model of a company obsolete before its competitors. Also, due to the arise of some new concepts, in recent years, like sustainable business models that pursue economic value at the same time as impact for environmental a shift occurs from the perspective of value creation for just some stakeholders to a a social value and focus on value creation for all stakeholders. In this perspective, know-how for co-growth and co-innovation are crucial, as well as new models of governance for organizations, assessment of the stakeholders, since there must be an integration mindset and an integrative approach to supply chain members and other stakeholders (Comin *et al.*, 2020).

2. Methodology

To achieve the main goal of this study, i.e., to identify the most relevant indicators for success or failure of a business model, several steps were performed. Ultimately, the findings are to be considered as inputs for a theoretical basis for an online digital tool to evaluate new ventures business models.

The first step was a literature review, in order to identify the latest empirical evidence of the types of business models and their use. This was considered fundamental not only because the shift for a digital economy can encompass different business model frameworks but also due to the importance that younger entrepreneurs give to sustainability, which can also impact the way a new framework should be prepared. The literature review also focused on the strategic perspective of the use of a business model in order to capture the most relevant factors and triggers for evaluation of success or failure. The second step was the development of a theoretical concept of a business model framework, including the possible success and failure factors. This will allow entrepreneurs to introduce key information and to make an assessment through an online business tool.

3. Results and Discussion

A business model framework must incorporate the possible analysis of success and failure factors (risks), in order to allow for entrepreneurs to make an evaluation, after introducing valuable information about the business.

After the literature review it was possible to find some indicators that can be described as the most relevant ones, grouped into seven categories as presented in table 1.1.

Table 1.1. Key Success Factors and Risks

Categories	Key Success Factors	Key Risks	References
Innovative Business Model	- Differentiation - Difficult replication of the Business Model - Capability of adaptation to dynamic and changing environments - Patents, research and development	- Disruptive innovations arising in the market	Yannopoulos (2013) cit. in Batocchio et al. (2016); Teece (2010); Phanghestu et al. (2020); Cassar (2009); Linden & Cantrell (2000)
Strategy	- Strategic fit between Business Model and business strategy - Understanding the trends and future needs - Sustainable innovation in company´s business practice, production processes or through products developed with new	- Unit margins of sale that are not aligned with competitors	Osterwalder & Pigneur (2010); Phangestu et al. (2020); Schüle et al. (2016); Comberg & Velamury (2017);

	sustainable technology (circular economy, sharing economy) - Customer orientation		Holtström et al. (2019); Boons & Lüdeke-Freund, F. (2013); Comberg & Velamury (2017)
New ventures' external linkages	- Existence of networks (inter- and extra-industry relationships and government relationships) - Resource combination capability - Business model designs (efficiency- and novelty-centered) - Processes of experimentation and implementation - Leadership of organizational change		YuZhengang et al. (2018); Chesbrough (2010)
Business Model Canvas – Generally considered	- Value to the targeted customer of the Business Model value proposition - Sufficient size of the market condition - Value proposition, core resources and capabilities, distribution channels, key activities, pricing and service, sources of revenue, cost structure	- Inefficiencies in the design of the Business Model - False assumptions about distribution channels, cost structure, unit margins and velocity of innovation	Heidi et al. (2015); Yannopoulos (2013) cit. in Batocchio et al. (2016); Mateu & March-Chorda (2016); Turulja & Bajgoric (2018); Cai & Zheng (2018)
Key Partners	- Collaboration: a) inter-firm b) vertical or horizontal c) involving other companies or governmental / educational institutions in joint planning; sharing of benefits and risks; scalability and confidence; sharing of systematic work information; work control between companies; mutual establishment of a corporate culture - Cooperation behaviour with successful companies on start-up performance		Yoon et al. (2017); Garidis & Rossmann (2019)
Resources and start-up capital	- Companies obtaining their capital from micro-finance, personal savings, families and equity capital - Financing innovation on assets-based SME financing; Factoring; Purchase Order Finance; Warehouse receipts; Crowdfunding; peer-to-peer (P2P) lending; venture capital and angel investment; Supply chain financing;		Tewodros Biset Amene (2017); Md. Qamruzzaman & Wei Jianguo (2019)

	Chattel Mortgage mode; and SMEs Finance Leapfrogs through Fintech Innovations		
Cost Structure	- Balance between value offer to customers and value capture through well designed financial indicators - Uniform cost structure - Plan for unexpected costs	- Rise of direct and indirect costs	Turulja & Bajgoric, 2018; Haddad et al., 2020; Md. Qamruzzaman & Wei Jianguo (2019); Robin Booth (2020)

Source: Own elaboration based on literature review

Conclusion

Preparing a new venture is not an easy task. If we add the lack of experience of the entrepreneurs in previously running a business or the lack of management studies, the task is even more complex and more likely to fail.

Along this chapter, several success and failure factors were presented with the aim of including them in the design of the business model preparation tools, and ultimately to diminish the likelihood of businesses to fail. Business model preparation must include the questions that will allow the search for the answers. Only by preparing an extensive framework of objectively evaluated questions and answers, one can have a glimpse of the success odds of the business venture.

As presented before, there's not one part of the business model that is more relevant than the other – all parts are important, and the unbalanced structure will end in unbalanced businesses that can be out of resources even before having the possibility to present the innovation to the market (e.g., disruptive innovations introduced by competitors that were not well identified; unit margins of sale that are not aligned with competition; value proposition or customers' needs not attended). This alignment of the whole business model is therefore needed for the correct understanding of the business implementation strategy when it comes to new ventures. So, a tool that allows entrepreneurs to build their business models would be most valuable with the incorporation of information identified as the most influent in the success or failure of a business. Despite early-stage entrepreneurs feel that there is a lot to search and that it would be overwhelming, such a work could be the difference between wasting a lot of time and money in unsuccessful business models or having the possibility to shape and restructure it from the very beginning.

Such a tool would allow entrepreneurs to decide whether to invest their time and money in a specific business model or reshape it, considering the information gathered regarding the different components.

Questions for discussion and reflection
• How important is a business model when you are starting a new business? • Based on the existing research, which business models do you identify? In your opinion, is there a "best" business model (more adequate than others)? Why (not)? • Choose an industry and identify five Key Success Factors and five Key Risks (other than those of table 1.1). • Relating to the same industry that you chose before, define a strategy to look for information, that can allow the understanding of that specific business environment.

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